FINDING OF NO SIGNIFICANT IMPACT/SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR THE CLOSURE OF FEDERAL WATERS FOR A PUBLIC HEALTH EMERGENCY RED TIDE EVENT

National Marine Fisheries Service
Northeast Regional Office
Gloucester, MA

May 2006

I. FINDING OF NO SIGNIFICANT IMPACT (FONSI)

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. '1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

Response:
The proposed extension of the closures for the Atlantic surfclam/ocean quahog fishery and the Atlantic sea scallop fishery are not anticipated to adversely impact the sustainability of any of these species. The closures would prohibit commercial harvest of these shellfish species within the closure areas. It is possible that fishing effort for whole scallops would shift to outside the PSP Areas of Concern (see Section V of Environmental Assessment EA) and therefore would not substantially reduce catches in the overall region. The catch limit imposed by Surfclam/Ocean Quahog and Scallop Fishery Management Plans are still in effect and adverse impacts to the sustainability of these fisheries would not occur.

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

Response:
Because the proposed closure extensions would not increase the harvesting of shellfish, the levels of bycatch should also not increase. The scallop closure may reduce bycatch of this fishery within the closure area. As mentioned, if effort shifts to the south, levels may increase in those areas. However, the net impact is likely no effect.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

Response:
The proposed closure extensions will not have any adverse impacts to habitat since the administrative closure for either fishery would not increase fishing effort in the closure areas. Fishing effort for whole scallops may be slightly reduced within the PSP Area of Concern, but would likely shift to outside that area. The result would not substantially change overall fishing effort in the region. The closures, therefore, would have less than minimal effects on the essential fish habitat (EFH) to these and the other species that occur in the area.

4) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response:
The proposed closure is not expected to have adverse effects on public health or safety since the closure is designed to protect public health by prevention of consumption of contaminated shellfish. The action would not affect the safety of surfclam and ocean quahog fishers since none fish within the current closure area proposed for extension. However, some scallop vessels would be affected. Although both limited access and general category scallop vessels can both land whole scallops, limited access vessels do not appear to engage in so-called shell stocking and at-sea shucking is a common practice for many general category vessels. Thus, the general category vessels, which are smaller vessels, are more likely to land whole scallops than limited access vessels. If the general category fishers decide they must land whole (or roe-on, i.e., with eggs) scallops, they may need to travel further to harvest outside of the PSP Area of Concern putting them more at risk to safety. Given the small trip limits (50 bushels/trip) associated with this category, there is a low incentive to travel a great distance to land a small amount of whole product. Thus, this would likely affect only a few vessels. (Section VII).

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

Response:
Since the proposed closure does not increase fishing effort in the closure area, no adverse impacts to any endangered or threatened species or their habitats are anticipated. The surfclam and quahog fishery is designated as a Category III fishery in the final List of Fisheries (LOF) for 2006 for the taking of marine mammals by commercial fishing operations under the MMPA. Due to clam dredge fishing protocol, physical configuration, and the typical slow movement of the gear, the fishery has little interaction potential with endangered and threatened species. Loggerhead and leatherback turtles could be potentially affected since they are incidentally captured in scallop dredges. However, these species do not occur in the PSP Area of Concern for most of the January

to June period. Therefore, any encounters with these or other species of turtles make interactions with this fishery unlikely during this period.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response:
No impacts on biodiversity or predator prey relationships are anticipated due to the fact that the proposed closure reduces fishing effort within the closure area.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response:
There are no social or economic impacts related to the natural or physical environment effects since there are no adverse effects to the ecosystem from this administrative action. In general, the social/economic impacts that are anticipated are considered minor. Since there are no surfclam or ocean quahog resources landed from the PSP Area of Concern, no impacts to impact to these fishers, processors, or dealers are anticipated. The impact of the closure on general category scallop vessels would be minor since whole scallop landings from the PSP Area of Concern represent only less that 1% of total scallop landings. Fishers would still receive revenue from the sale of shucked scallops but may incur more costs due to increased sea time, additional crew, and added fuel. (see Section VII)

8) Are the effects on the quality of the human environment likely to be highly controversial?

Response:
The effects of the proposed closure are not expected to be highly controversial. This closure, which maintains a very high public profile, has not been controversial due to the health issue posed by the presence of PSP in the closure area. Nevertheless, a further extension of the current closure due to inadequate sampling may be expected to be controversial with some industry segments. This action would extend the current closure through December 31, 2006. Subsequently, if warranted, the regulations may be terminated at an earlier date, pursuant to section 305(c)(3)(D) of the Magnuson-Stevens Act, by publication in the Federal Register of a notice of termination.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

Response:

The proposed closure does include the Stellwagen Bank National Marine Sanctuary. However, because the proposed action reduces the likelihood of shellfish dredging in the Sanctuary, it is not expected to have any adverse impacts to Sanctuary resources.

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response:
There are no issues associated with the proposed closure that involve any uncertain or unique risks to any resources.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response:
Due to the fact that the proposed closure has no environmental effects, no cumulative effects on any of the shellfish species, incidentally caught species, habitat, or protected species are anticipated. There may be cumulative effects on general category scallop boats which typically land whole product. However, since this represents a small portion of the total landings (< 1%) taken from the closure area and the trip limit for the general category boats that land whole scallops have a 50 bushel limit, the incremental effect of the closure is minor. (see Section VII)

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response:
No such resources are adversely affected by the proposed closure extension.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response:
The proposed closure will not introduce or spread non-indigenous species into the closure areas.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response:
The proposed closure extension does not establish any precedent for future actions.

15) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response:
No Federal, State or local laws are violated by the proposed closure.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response:
No cumulative impacts to the shellfish species or other species caught shellfish dredging since the proposed closure would have any direct or indirect effects to these resources.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Supplemental Environmental Assessment prepared for the closure of federal waters for a public health emergency red tide event, it is hereby determined that the proposed closure will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.

_____

William T. Hogarth, Date
Assistant Administrator for Fisheries

II. INTRODUCTION

The following supplemental environmental assessment (EA) has been prepared for a unique administrative action that has no physical or biological impacts to the environment. It is supplemental to the EAs that were issued June 14, 2005 and December 20, 2005, for the initial Paralytic Shellfish Poisoning (PSP) Closure caused by the red tide bloom during the spring period. The administrative nature of the closure would have normally qualified for a categorical exclusion (CE) under the NOAA Administrative Order (NAO) 216-6 which implements NEPA for all the NOAA line offices including National Marine Fisheries Service (NMFS). Since NOAA did not anticipate adopting such a CE during implementation of NEPA, we have prepared this EA to provide NEPA review for this action. The brief level of impact analysis of this document is consistent with low level of environmental impact associated with this action.

III. BACKGROUND

In June 2005, the U.S. Food and Drug Administration (FDA) requested the National Marine Fisheries Service (NOAA Fisheries Service) to close an area of Federal waters off the coasts of New Hampshire and Massachusetts (Appendix I B) to fishing for bivalve shellfish intended for human consumption (USFDA, 2005a). This included Atlantic surfclams, ocean quahogs, and scallop viscera. The final rule for the first action, in effect from June 14 through September 30, 2005, was published in the Federal Register on June 16, 2005 (70 FR 35047). The rule was modified on July 7, 2005 (70 FR 39192), to allow for the collection of biological samples by commercial fishing vessels with a Letter of Authorization signed by the Regional Administrator. The only exception to the closure was for sea scallops harvested for onboard shucking of the adductor muscle. The scallop adductor muscle, or meat, does not bioaccumulate the toxin.

As a result of tests conducted by the FDA in cooperation with NOAA Fisheries Service and the fishing industry, NOAA Fisheries Service reopened the Southern portion of those waters on September 9, 2005 (70 FR 53580), to bivalve shellfish fishing, with the exception of whole and roe-on scallops (see Appendix I A). The partially reopened closure, which expired on September 30, 2005, was later continued through December 31, 2005, in October 3 and 18, 2005, Federal Register Notices (70 FR 57517 and 70 FR 60450). The closure, as configured on September 9th, was extended again in December 2005 for the January through June 2006 period.

The FDA has once again (USFDA, 2006a) requested NOAA Fisheries Service to extend the closure, currently due to expire on June 30, 2006, due to the fact that the FDA continues to have insufficient analytical data to support reopening the entire area to all bivalve molluscan shellfish on July 1, 2006. At this time, the Regional Administrator has determined that continuing the current closure through December 31, 2006, is appropriate, since the closure would be based on the lack of any concrete data confirming the shellfish are safe to consume.

IV. PURPOSE AND NEED FOR THE CLOSURE EXTENSION

The purpose of this emergency action is to extend the closure of Federal waters off the coasts of Massachusetts and New Hampshire to fishing for shellfish (bivalves) under the provisions in section 305(c)(3)(C) of the Magnuson-Stevens Act. The affected species include surfclams (*Spisula solidissima*), ocean quahogs (*Artica islandica*) and blue mussels (*Mytilus edulis*) and the landing of whole (and roe-on) sea scallops (*Placopecten magellanicus*) that can all bioaccumulate the PSP toxin. In the spring of 2006, a red tide bloom from the dinoflagellate, *Alexandrium* sp. has forced state shellfish officials to close state shellfish beds throughout the Commonwealth of Massachusetts. The bloom has moved in an easterly direction from state waters into Federal waters based on data and tests conducted by the State of Massachusetts and Woods Hole Oceanographic Institution. The U.S. Food and Drug Administration (FDA) and NMFS are working closely with these groups to monitor the bloom and determine the length of closure.

The need for the extension of the closure is to protect the health of human consumers from consuming contaminated shellfish taken in Federal waters. It is unknown at this time whether there is any accumulation of Paralytic Shellfish Poisoning (PSP) neurotoxin remaining in shellfish in the closure area. There was a major bloom of toxic *Alexandria fundyiense* in the area in 2005, and there is a significant density of harmful alga in the area in 2006. If shellfish located the closure area are contaminated with PSP toxin in toxic concentrations, consumption may cause illness or death to the human consumer. As a result of concerns for the shellfish consumers throughout the northeast region, the FDA has requested NMFS in a June 2006 letter (USFDA 2006), to extend the existing closure Federal waters off the states of New Hampshire and Massachusetts. Without this action, it is possible that shellfish taken from these areas could be landed in states where there is no prohibition on such landings.

V. PROPOSED CLOSURE AND ALTERNATIVES

A. Descriptions of the Closure Areas:
In June 2005, the portion of the EEZ, roughly 100 by 200 nautical mile rectangular area, bounded by the following coordinates in the order stated: (1) 43° 00’ N. lat., 71° 00’ W. long.; (2) 43° 00’ N. lat., 69° 00’ W. long.; (3) 40° 00’ N. lat., 69° 00’ W. long.; (4) 40° 00’ N. lat., 71° 00’ W. long, and then ending at the first point (hereafter referred to as the “PSP Area of Concern” see Appendix IB) was temporarily closed to surfclams, ocean quahogs and all other bivalve shellfish fishing (with the exception of shucked scallops). In October 2005 the public health threat of PSP was determined to have partially abated in the southern half of the PSP Area of Concern (hereafter referred to as the “Southern PSP Area of Concern” – see Appendix IA) bounded by the following coordinates in the order stated: (1) 41° 39’ N lat., 69°00 W long.; (2) 41° 39’ N lat., 71° 00’W long.; (3) 40° 00’ N lat., 71° 00’W long.; (4) 40° 00’ N lat., 69°00 W long.; and then ending at the first point. This area was re-opened to permit fishing for surf clams and ocean quahog, but not for other shellfish except shucked scallops. However, not enough testing had been conducted to determine whether the health threat posed by PSP in the northern half of the

PSP Area of Concern (hereafter referred to as the "Northern PSP Area of Concern" - see Appendix IA) in the roughly 95 by 115 mile rectangular area (excluding Cape Cod Bay), bound by the following coordinates in the order stated: (1) 43° 00' N. lat., 71° 00' W. long.; (2) 43° 00' N. lat., 69° 00' W. long.; (3) 41° 39' N. lat., 69° 00' W. long.; (4) 41° 39' N. lat., 71° 00' W. long had abated resulting in its continued closure to surfclam, ocean quahog and all other bivalve shellfish fishing (with the exception of shucked scallops). The alternatives described below would affect shellfish fishing in the defined PSP Area of Concern in its entirety or in either the Southern PSP Area of Concern or the Northern PSP Area of Concern.

B. Alternative A

Closure areas for two fisheries are presented. The proposed action implemented for Surfclams, Ocean Quahogs and other shellfish species (except Sea Scallops) would depend on the extent of the red tide bloom and would be based on advice from FDA. Both alternatives are assessed here.

1) Extend the present closure of the Northern PSP Area of Concern for Surfclam/Ocean Quahog and General Bivalves:

This action would temporarily extend the already closed Northern PSP Area of Concern of the Exclusive Economic Zone (EEZ) of the Northeastern United States to surfclams, ocean quahogs and all other bivalve shellfish fishing (with the exception of shucked scallops). The closure would be in effect until December 31, 2006, which may be reduced or further extended after tests confirm that the concentration of toxin in shellfish has returned to levels determined by the National Shellfish Sanitation Program (NSSP) to be safe for human consumption. Under this alternative the Southern PSP Area of Concern would remain open to surf clam and ocean quahog fishing.

2) Scallop Closure:

This alternative would continue the present temporary closure of the EEZ portion of the entire PSP Area of Concern to whole (and roe-on) sea scallop fishing, again, with the exception of sea scallop adductor muscles harvested and shucked at sea. The closure will be in effect until December 31, 2006, which may be reduced or extended after testing by FDA.

C. Alternative B

1) Close Entire PSP Area of Concern for Surfclams/Ocean Quahogs

This alternative would temporarily extend the closure mandated in June 2005, to surfclams, ocean quahogs and all other bivalve shellfish fishing (with the exception of shucked scallops) in the entire PSP Area of Concern. The alternative closure, if determined to be necessary, would be in effect until December 31, 2006, which may be reduced or extended after testing by FDA.

2) Scallop Closure:

This alternative would continue the same present temporary closure of the EEZ portion of the entire PSP Area of Concern to whole (and roe-on) sea scallop fishing described above and would be in effect until December 31, 2006, which may be reduced or extended after testing by FDA.

D. Alternative C.
Status Quo (the baseline) Current until June 30, 2006 based on the December 2005 Closure:
This alternative means that the Northern PSP Area of Concern closure (for surfclams, ocean quahogs and other bivalve species) and the entire PSP Area of Concern closure (for whole scallops), described above, that would have expired on June 30, 2006, would continue providing continuity with the closures. This alternative is the baseline scenario for this EA since it represents continuation of the current condition. If the Northern PSP Area of Concern is proposed for closure, it in effect is the same as Alternative A except the closure would be extended another 6 months.

E. Alternative Considered but Not Further Analyzed:
No Action: Reopening of Closed Areas on July 1, 2006
The reopening of both the Northern PSP Area of Concern to surfclam and ocean quahog fishing and the entire PSP Area of Concern to roe-on or whole scallops would leave the possibility that PSP-contaminated bivalve shellfish harvested in these closure areas would reach the market place, particularly, if landed in a state other than the homeport of the vessel. This is not considered a viable alternative since, without data; there are no assurances that harvested shellfish from the proposed closure area do not contain PSP toxin levels. The FDA has indicated that they do not have the resources to collect data necessary to determine if PSP levels are safe (DiStefano, pers. comm.). Thus, the collection of data also is not a viable alternative to the closure extension. Thus, this option does not meet the purpose of protecting the public from consumption of PSP-contaminated shellfish.

There are no other alternatives to protect public health. Generally, under Section 306 of Magnuson-Stevens Act, states do have authority to prohibit landings from federally permitted vessels from their own state, but not vessels from other states. It is unclear whether each state has their own authority to prohibit landings of shellfish taken from these areas or, if not; whether they could modify their legal basis soon enough to prevent landings and potential exposure of the human consumer to contaminated shellfish.

VI. AFFECTED ENVIRONMENT

The following is excerpted from Amendment 13 to the Atlantic Surfclam and Ocean Quahog Fishery Management Plan (MAFMC, 2003). The reader is referred to this document for more detail information on the fisheries and other resources described below.

A. Location/Physical Environment of the Closure Area
The region bounded by the entire PSP Area of Concern is roughly a 100 by 200 mile rectangle off the shore of both New Hampshire and Massachusetts (See Appendix I B). The northern half of this area is the Northern PSP Area of Concern (Appendix I A). The

overall area is bounded by the 3-mile territorial sea boundary of the New Hampshire and Massachusetts coastline northward to the northern limit of Jeffreys Ledge, seaward by eastern edge of Wilkinson Basin and southward to the 50-fathom depth contour. North of Cape Cod, the area represents the more inshore portions of the southwestern Gulf of Maine with dominant sediments of mud, sand and occasional bedrock. South of Cape Cod the area is predominantly sand interspersed with mud and muddy sand. Depths range from about 15-50 fathoms.

B. Surfclam/Ocean Quahog Fisheries

Surfclams (*Spisula solidissima*) are bivalve mollusks which are distributed in the western North Atlantic from the Gulf of St. Lawrence to Cape Hatteras. Commercial fisheries have generally concentrated on the populations which have flourished in oceanic sandy areas in depths ranging from the beach zone to about 200 feet. Their numbers are scarce, however, in depths greater than 130 feet. Ocean quahogs (*Artica islandica*) are found in the colder waters on both sides of the North Atlantic. On the western Atlantic, they range from Newfoundland to Cape Hatteras at depths from 25 to 750 feet. Both species occur and are commercially harvested within the PSP closure area.

Both the surfclam and ocean quahog fisheries are managed by the Mid Atlantic Fishery Management Council under the Surfclam/Ocean Quahog Fishery Management Plan that was approved in 1977 (MAFMC, 1977). Both fisheries have been managed under an Individual Transfer Quota (ITQ) since 1990 where annual landings are allocated disproportionately to the participating vessels based on a combination of performance history and vessel size. Neither species is characterized as overfished.

The surfclam/ocean quahog is considered a "clean" fishery with regards to incidental catch since the target species comprises well over 80% of the catches. The remaining species include a variety of benthic invertebrates including a variety of crabs, other bivalves, snails, and starfish, among them rock crab, sea scallops, Jonah crab, several species of whelks and horseshoe crab (MAFMC, 2003).

A total of 3.1 million bushels of surf clams were landed in 2002 valued at $40 million (Table 1). Surf clam landings increased slightly in 2003 but declined in both 2004 and 2005. Even though landings declined by about 400 thousand bushels in 2005, an increase in average price to almost $13 per bushel resulted in industry revenues equivalent to that received in 2004.

Table 1. Summary of Surf Clam Landings by Area

Year	Total Bushels	Total Sales ($millions)	Non-PSP Area of Concern (bushels)	Southern PSP Area of Concern (bushels)	Northern PSP Area of Concern (bushels)	Percent From PSP Area of Concern	Average Price per Bushel
2002	3,100,000	40.0	3,100,000	3,040	0	0.1%	$12.85
2003	3,200,000	39.4	3,200,000	33,536	0	1.0%	$12.15
2004	3,100,000	35.2	2,900,000	244,768	0	7.8%	$11.22
2005	2,700,000	35.2	2,500,000	214,072	0	7.8%	$12.83

During calendar years 2002 and 2003, no surf clams were landed from the Northern PSP Area of Concern and only small quantities of surf clams were harvested from the Southern PSP Area of Concern. Calendar year 2004 and 2005 landings were considerably higher from the Southern PSP Area of Concern than in prior years because of the discovery of high-density beds of surfclams. These high density areas are economically attractive since production costs are lower per bushel hence landings from the Southern PSP Area of Concern were almost 8% of total surf clams harvested in 2004 and 2005. The attractiveness of this area may be expected to diminish over time as catch per unit effort declines to levels similar to that of alternative harvesting areas.

The pattern of landings and prices for ocean quahogs was similar to that of surfclams from 2002 to 2005. Four million bushels of ocean quahogs were harvested in 2002 followed by a small increase to 4.2 million bushels in 2003 and an annual decline to 3 million bushels in 2005 (Table 2). The decline in ocean quahog landings in 2005 were partially offset by an increase in average price to just over $7 per bushel.

Landings from the entire PSP Area of Concern ranged from a low of 5.7% of total harvested ocean quahogs in 2003 to 8.4% in 2002. Within the PSP Area of Concern the majority of landings came from the Southern portion of the area. However, in 2005 the importance of the Southern PSP Area of Concern was substantially diminished (1.8% of total landings). The closure of the PSP Area of Concern for several months may have been partly responsible, but landings from the Southern PSP Area of Concern were already well below the norm prior to the closure and continued to be below the norm even when the area had been reopened. Thus, the reduction in annual landings in general, and from the PSP Area of Concern in particular, are unlikely to be attributable to the PSP closure alone.

Table 2. Summary of Ocean Quahog Landings by Area

Year	Total Bushels	Total Sales ($millions)	Non-PSP Area of Concern (bushels)	Southern PSP Area of Concern (bushels)	Northern PSP Area of Concern (bushels)	Percent From PSP Area of Concern	Average Price per Bushel
2002	4,000,000	25.5	3,700,000	337,331	0	8.4%	$6.34
2003	4,200,000	26.0	4,000,000	237,344	0	5.7%	$6.21
2004	3,900,000	23.6	3,600,000	301,856	5,632	7.8%	$6.02
2005	3,000,000	21.5	3,000,000	53,856	0	1.8%	$7.07

C. Scallop Fishery

The following is excerpted from Amendment 10 to the Atlantic Sea Scallop Fishery Management Plan (NEFMC, 2004) and Framework 18 of that plan. The reader is referred to these documents for more detailed information on the fisheries and other resources described below.

The Atlantic sea scallop (*Placopetcen magellanicus*) is distributed along the continental shelf, typically on sand and gravel bottoms from the Gulf of St. Lawrence to North Carolina. The species generally inhabit depths of 54 to 350 feet but are most abundant on the shelf between 60 and 150 feet. The species is most abundant in eight resource areas throughout its range. These include: Gulf of Maine, South Channel, Georges Bank North, Georges Bank South, Southern New England, New York Bight, Delmarva, and Virginia/North Carolina. In 2003, about 90% of the landings came from three of the eight areas: Delmarva (44%), New York Bight (35%) and South Channel (11%) areas. The remaining 5 areas make up the remaining 10%. The entire Scallop PSP closure area includes portions of the Gulf of Maine, South Channel and Southern New England resource areas and therefore includes less than 20% of the total landings. Sea scallop abundance and biomass are currently at a record high, particularly in the mid Atlantic region. In 2003, sea scallops were not overfished, but overfishing was occurring.

The fishery is prosecuted using dredges and trawls which have restrictions on width, mesh and ring sizes. The fishery is managed through limited access and general category permits with specified limits on trips in management access areas and days-at-sea outside of these areas. Within the access areas vessel are allowed to possess 18,000 lb per trip. The access areas are reviewed annually and are opened and closed to protect the harvesting of smaller scallops. (Three areas are currently open: Closed Areas I and II on Georges Bank and the Hudson Canyon area. As proposed in the draft FW 18 (NEFMC, 2005), the proposed areas include Closed Area II, Nantucket Lightship area and the Hudson Canyon.) The general category vessels are regulated through trip limits and may land up to 400 lb meat or 50 bushels of whole scallops anywhere in Federal waters outside of the formally closed habitat areas. Any vessel is authorized to possess up to 40 lbs of scallop meat or 5 bushels if caught as bycatch. Typical species caught incidentally in dredges and trawls are listed in descending order for each gear: summer flounder, monkfish, groundfish and lobster in dredges; and groundfish, summer flounder, squid/mackerel/butterfish, monkfish, black sea bass, lobster, bluefish and scup in trawls.

Normally, most vessels land meats (the adductor muscle) which are shucked on board by a regulated number of crew. Although both limited access and general category scallop vessels can both land whole scallops, most, if not all, limited access vessels generally land only meats. It is not common for limited access vessels to leave only a small portion of their catch unshucked. General category vessels are more likely to land whole scallops than limited access vessels since they deal with smaller catches and do not often have adequate crew to shuck at sea. Limited access scallop vessels are required to shuck scallops seaward of the Vessel Monitoring System (VMS) demarcation line, meaning that all but 50 bushels must be in shucked form before the vessel enters port. This restriction applies to vessels that fish for scallops south of 42^{o} 20' N, or that transit that area. (That area includes about the bottom three-fourths of the June Closure Area – Appendix I B.) The majority of limited access fishing activity occurs in the more productive scallop areas that lie south of 42^{o} 20' N. No current information suggests that limited access scallop vessels land in-shell scallops at any noticeable level. General category vessels may tend to land more in-shell scallops, i.e., conduct so called shell stocking, because of niche markets particularly for roe-on scallops or crew and vessel operation limitations.

These general category vessels are typically smaller in size and may or may not have adequate deck space to accommodate additional crew required to shuck at sea. Dealer data does not provide a species code for whole scallops, but Vessel Trip Report (VTR) data does include such species codes.

To provide an estimate of the potential extent of shell-stocking activity VTR data were queried to identify any records that either reported landing scallops as shells or by the bushel. These landings were further disaggregated to identify how much shell-stocking activity may be taking place within the PSP Area of Concern that would be affected by the proposed action. Note that reported VTR landings in shell form were converted into meat weight by dividing reported shell weight by 8.33 while reported bushels were converted to meat weight by dividing reported bushels by 8.

Reported scallop meat weight in both dealer and VTR sources of data were nearly identical in each year from 2002 to 2005 (Table 3). Scallop landings ranged from nearly 53 million pounds in 2002 to 64 million pounds in 2004. Vessels reporting engagement in the landing of whole scallops contributed less than 1% of total meat weight. Of the quantity of whole scallops landed, the majority came from within the PSP Area of Concern and the Northern PSP Area of Concern in particular although the proportion of whole scallops landed from outside the PSP Area of Concern declined from 77% in 2002 to 53% in 2004. The reduction in whole scallops in 2005 from the PSP Area of Concern was due to the PSP closure that remained in effect from June 2005 to the present. Scallop vessels do not appear to have compensated for the PSP closure by fishing for whole scallops elsewhere as shell-stock activity outside of the PSP Area of Concern actually declined in 2005 compared to 2003 or 2004.

Table 3. Summary of Scallop Landings by Product Form and PSP Area of Concern

Year	Dealer Reported Meat Weight (million lbs meat weight)	Dealer Reported Dockside Sales ($ millions)	VTR Reported Total Shucked (million lbs meat weight)	Shellstock Inside Southern PSP Area of Concern (lbs meat weight)	Shellstock Inside Northern PSP Area of Concern (lbs meat weight)	Shellstock Outside PSP Area of Concern (lbs meat weight)	Shellstock as a Percent of Total Meat Weight	Shellstock in PSP Area of Concern as a Percent of Total Shellstock
2002	52.7	202.3	52.0	181	40,005	11,726	0.10%	77.4%
2003	56.0	229.3	55.4	2,785	37,704	20,835	0.11%	66.0%
2004	64.5	320.7	63.8	509	26,280	23,979	0.08%	52.8%
2005	56.2	430.8	56.5	418	7,891	12,884	0.04%	39.2%

The total number of vessels reporting at least some scallop landings on VTR's increased from 620 vessels in 2002 to 976 in 2005 (Table 4). Of these vessels the overwhelming majority did not report landing any whole scallops. In 2002, only 23 vessels reported landing whole scallops at all. The number of vessels that landed whole scallops increased to 27 in 2003, 29 in 2004, and declined to 28 in 2005.

Table 4. Summary of Vessels Reporting Landing Scallops on VTR's

Year	Number of Reporting Vessels	Reporting Vessels With no Whole Scallops	Reporting Vessels With Whole Scallops
2002	620	597	23
2003	666	639	27
2004	821	792	29
2005	976	948	28

The relative importance of whole scallops to each vessel's scallop business varies. In 2002 the median proportion of whole scallops to total scallop landings was less than 4.7% (Table 5). This means that 11 or 12 vessels relied on whole scallops for less than 4.7% of scallop landings while whole scallops were more important for about the same number of vessels. For example, at the 75th percentile (equivalent to 5 or 6 vessels) relied on whole scallops for almost 22% of total scallop landings. Since 2002, the relative reliance on whole scallops has generally declined as the maximum reliance has declined from nearly two-thirds in 2002 to 39% in 2004. Median reliance on whole scallops did increase to 7.5% from 2002 to 2003 but declined to 1.2% in 2004.

Table 5. Proportion of Whole Scallops to Total Scallops Landed by Vessels Landing Whole Scallops

Year	Median	75th Percentile	90th Percentile	Maximum
2002	4.7%	21.8%	30.4%	65.6%
2003	7.5%	13.3%	30.9%	45.1%
2004	1.2%	10.7%	27.8%	38.8%
2005	1.4%	4.3%	14.0%	18.3%

D. Protected Species

There are numerous species of marine mammal and sea turtle species that inhabit the PSP closure area and are protected under the Endangered Species Act (ESA) of 1973. The species protected by either the Endangered Species Act or the Marine Mammal Protection Act that are found in this region are cetaceans (14 species), sea turtles (5 species), fish (2 species), and birds (2 species) are found in Appendix II. The protected species and marine mammals are described in detail in Section 6.1.3.1 of the Amendment 13 of the Surfclam and Ocean Quahog FMP (MAFMC 2003).

Marine mammals including the humpback whale, northern right whale, fin whale and four species of protected sea turtles may be found in the action area for this fishery. The four turtle species found in the action area are the loggerhead sea turtle, Kemp's ridley sea turtle, green sea turtle, and leatherback sea turtle. The gear used for the surfclam and ocean quahog fisheries is a hydraulic clam dredge. Due to clam dredge fishing protocol, physical configuration and the typical slow movement of the gear, the fishery has little interaction potential with endangered and threatened species. The fisheries are included

under Category III in the final List of Fisheries (LOF) for 2003 for the taking of marine mammals by commercial fishing operations under the MMPA.

Surfclam and ocean quahog fisheries and ESA-listed species overlap to a large degree, and there always exists some very limited potential for an incidental take. However, there have been no documented takes of any marine mammal or sea turtle in either the surfclam or ocean quahog fisheries. The effects of the surfclam and ocean quahog fisheries on protected marine mammals and sea turtles have been previously considered in informal ESA Section 7 consultations. While listed species may occur near surfclam and ocean quahog beds, it is likely that there will be no conflict between the fishers of this FMP and these endangered or threatened species because surfclam and ocean quahog dredges are very slow moving and listed species are capable of moving out of the way and avoiding the gear. NOAA Fisheries therefore does not believe the implementation of this action will have any adverse impact upon these ESA-listed species.

For the scallop fishery, the same list of species (Appendix II) applies. Based on a recent NMFS Biological Opinion (NOAA 2004), scallop fishing has been determined to potentially adversely affect loggerhead and leatherback turtles since they are incidentally captured in scallop dredges. The distribution and behavior of other species of turtles makes interactions with this fishery unlikely. To reduce capture of loggerheads and leatherbacks, NMFS proposed a new regulation (FR Notice May 27, 2005) requiring a chain mat, sized to the dredge, which are anticipated to reduce the capture levels of these species and ensuing injuries and mortalities.

VII. IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

A. Ecosystem Impacts of the Closures

The proposed closure extension for both Northern PSP Area of Concern for surfclams and ocean quahogs and the entire PSP Area of Concern for whole scallops (Alternative A) is purely administrative and therefore would not have any physical or biological effects on the fisheries or other biological resources, habitat or any protected species that reside in the closed area. Further, since fishing for surfclams and ocean quahogs does not occur in the Northern PSP Area of Concern, as mentioned above, there are currently no impacts to these resources occurring without the closure.

Extension of the entire PSP Area of Concern for surfclams and ocean quahogs from the Northern PSP Area of Concern (Alternative B), would have no adverse impacts on the ecosystem. The closure may reduce fishing effort for ocean quahogs, which takes place within the Southern PSP Area of Concern. Thus, continuing closure of the entire PSP Area of Concern for another 6 months may have some short term benefits to the harvested ocean quahogs and other bottom dependant species that also are caught incidentally in the otter trawls, hydraulic clam dredges or scallop dredges that are used in this and other fisheries

Extension of the PSP Area of Concern for whole scallops (also a proposed action) also would have no adverse impacts on the ecosystem. The closure is not likely to change scallop fishing in the area since most fishing (96%) of the landings from the Closure Area are landed by limited access vessels that generally land shucked product. The portion of general category vessels that typically land whole scallops could still fish in the area if they shuck their harvest. Otherwise, they would have to fish in areas outside the closure area. Thus any change in scallop fishing effort is likely small**.**

Both the proposed extensions of the Northern PSP Area of Concern for surfclams/ocean quahogs and the entire PSP Area of Concern for whole scallops provide habitat for the majority of the Essential Fish Habitat (EFH) listed species and occur in the Northwest Atlantic shelf. A listing of these species and a description of their habitat may be found on the following web address (**http://www.nero.noaa.gov/hcd/webintro.html**)**.** The proposed closure extensions would not have any adverse impacts to habitat for the same reasons cited above. For Alternative B, PSP Area of Concern for surfclams/ocean quahogs, there may be some temporary benefit to the Southern PSP Area of Concern due to prohibition of harvesting ocean quahogs that occur in the area. Such a reduction might result in less overall impact to the bottom community in that area. However, if effort is shifted to other areas, then, then no net benefit or adverse impact to these resources or habitat would occur. Even so, it is likely that the closures are would have less than minimal effects on the EFH to these and the other species that occur in the closure area. Thus, there is no need for an EFH consultation for the proposed closure extension for any of these alternatives.

The impacts of Alternative C, Status Quo, would be similar to that of the proposed closure extensions since this administrative action would not affect the marine resources or the habitat in the closed area. Under all alternatives, the occurrence of the red tide may have adverse effects on marine wildlife, such piscivorous birds or marine mammals because of ingestion of the toxin.

B. Impact to Human Health and Safety:
A positive benefit to human health of the extension of the Northern PSP Area of Concern would be to provide assurance that contaminated shellfish would not reach the market place thereby ensuring the safety for human consumers. Implementing a more widespread closure (the entire PSP Area of Concern) for surfclams, ocean quahogs and other bivalves exclusive of whole scallops does not appear to be necessary based on the present request from FDA (USFDA, 2006a). Therefore, the extra health benefits from a larger closure are not warranted at this time given the low potential for risk and the higher potential for economic impact associated with the entire PSP Area of Concern.

The action would not affect the safety of surfclam and ocean quahog fishers since none fish within the current closure area proposed for extension. However, some scallop vessels would be affected. Although both limited access and general category scallop vessels can both land whole scallops, most, if not all, limited access vessels land only meats. Thus, the general category vessels, which are smaller vessels, are more likely to land whole scallops than limited access vessels. If the general category fishers determine

they must land whole (or roe-on, i.e., with eggs) scallops, they may need to travel further to harvest outside of the PSP Area of Concern putting them more at risk to safety. Given the small trip limits (/trip) associated with this category, there is a low incentive to travel a great distance to land a small amount of whole product. Thus, this would likely affect only a few vessels.

C. Economic Impacts of the Closure Alternatives

1.Alternative A:
Impact of Extending the Northern PSP Area of Concern for Surfclams/Ocean Quahogs:
The proposed extension of the Northern PSP Area of Concern would continue the current prohibitions on harvesting surf clams and ocean quahogs. Data from 2002 through 2005 indicate that no surf clams were landed from this area and in only one month were ocean quahogs landed from the Northern PSP Area of Concern. This means that continuing the Northern PSP Area of Concern closure would have no expected impact on harvest location decisions based on observed trips. Therefore, the proposed extension would have no economic impact on surf clam or ocean quahog markets or vessels that are engaged in the fishery.

Impacts of extending the Scallop Fishery Closure:
The proposed extension of the entire PSP Area of Concern for whole scallops would continue closure of the existing Closure Area through December, 2006. Within this area, all sea scallops harvested or possessed within the prescribed area would be required to be shucked at sea. This prohibition would not affect the majority of scallop vessels since limited access permit holders do not appear engage in so-called shell stocking and at-sea shucking is a common practice for many general category vessels. However, as mentioned above, the general category vessels or any other vessel that do engage in so-called shell stocking will need to shuck at sea if these scallops are harvested from the closure area.

As noted above, less than 1% of scallop supplies were landed as whole scallops from 2002 through 2005. This estimate may be low since shell stocking activity reported through VTR data may under-represent the actual extent of shell-stock activity. However, even if the extent of shell stocking is greater than estimated here, the proposed PSP closure would only have a negligible impact on the scallop market, including prices paid by consumers or received by scallop vessel owners.

The prohibition on shell stocking would affect those vessels that engage in this activity; estimated to be fewer than 30 vessels from 2002 through 2005. Of the total estimated landings by vessels involved in shell-stocking, most were harvested from within the prescribed boundaries of the affected PSP closure and almost all of these landings occurred on trips northward of 41 degrees 39 minutes, *i.e.*, the Northern PSP Area of Concern.

The economic impact of the prohibition on shell stocking may be offset by either continuing to shell-stock in areas outside the closure, or by taking on more crew and shucking scallops at sea. Fishing outside the area may involve fishing in less productive areas or areas that are less familiar or further away. Any one of these choices would likely reduce fishing vessel profits either by incurring higher costs or lower revenues or both. Vessels that take on more crew would also likely realize lower profit levels because some portion of sales would have to go to increased crew payments and because adding crew would not change the amount of scallops caught - which is capped for general category vessels. Some vessels may continue to fish with only one crew while shucking before returning to port. Doing so would increase trip duration, hence costs, and increase risk.

A comparison of shell stocking activity between 2004 and 2005 for the six-month period from June to December provides some insight as to what types of adaptations vessels may have made during this initial period. As noted previously, vessels that may have been engaged in landing whole scallops may be required to either take longer trips and/or increase crew size to handle the increased labor required to shuck at sea. During 2004 there were a total of 29 vessels that took at least one trip that landed whole scallops. From June to December, 2004 these vessels carried an average of 3 crew members on trips of 1.75 days (42 hours). From June to December, 2005 the average crew for these same vessels increased slightly to 3.2 and the average trip duration also increased to 1.9 days; an increase of four hours. These, data indicate that vessels that may well have adapted to the prohibition on harvesting whole scallops within the PSP Area of Concern by increasing crew and increasing trip duration.

Assuming no compensatory changes in effort or fishing practices an upper bound estimate of potential foregone scallop revenues can be estimated by the total value of shellstock activity that would be prohibited during the proposed closure. In effect, the closure period under consideration is year-round pending the ability to sample and test for PSP levels in scallop viscera in the affected areas. In 2004 approximately 27 thousand pounds (meat weight) of whole scallops were landed inside the entire PSP Area of Concern. At an average price of $5 per pound the total forgone revenue would be $135 thousand. As note previously, this estimate may be low if the VTR data under-represent the extent of shell-stock activity particularly by smaller general category scallopers. On the other hand, available data indicate that these vessels may already have adapted to the prohibition by increasing trip duration and adding crew. These adaptations would enable affected vessels to continue fishing for scallops and would tend to reduce foregone scallop revenues.

2. Alternative B:
Impacts of Extending the Entire PSP Area of Concern for Surfclams/Ocean Quahogs:
The impact of the extending the closure to include the entire PSP Area of Concern (i.e. closure of both the Northern and Southern PSP Areas of Concern to surfclams and ocean quahogs) would have different impacts on each fishery. For this reason the impacts on surf clams and ocean quahogs are discussed separately.

Impacts to the Surfclam Fishery:
During 2002 surf clams from the Southern PSP Area of Concern accounted for only 0.1% of total landings. Landings from this area increased to about 1% of total surfclams, increased more dramatically in 2003 and again in 2004 to nearly 8% of total surfclam landings due to the discovery of an unusually high-density patch of clams inside the Southern PSP Area of Concern. Catch rates in this area during 2003 were 203 bushels per hour, and 252 bushels per hour in 2004, significantly above the industry average of less than 100 bushels per hour. As effort continues to be exerted in the area, catch rates will decline until they reach a point where the economic returns to fishing inside the area will be no different than alternative fishing locations. This means that a closure of the entire PSP Area of Concern will have no long-term impacts on surfclam markets or the availability of product to different processors or different regions. That is, once catch rates approach the average, the importance of the Southern PSP Area of Concern will be diminished.

In the short term, however, if harvesters are unable to take advantage of the higher catch rates inside the closure, fishing profitability for a given amount of product will decline since the cost of harvesting will be higher at any alternative location with a lower catch rate. Higher fuel costs may also be a factor if vessels must travel farther than they would have to catch that fixed amount. Further, these costs are unlikely to be passed on to processors and final consumers since the elasticity of demand for clams is likely to be greater than one. An estimate of vessel profitability is not possible due to a lack of reliable cost data. However, a crude estimate of potential revenue loss may be derived from a comparison of surf clam revenues that would be foregone during a June-December closure based on observed landings for the same period during calendar year 20004. In 2004 228,576 bushels of surf clams were harvested from the Southern PSP Area of Concern. At an average price of $11 per bushel the revenue loss would be $2.5 million. This estimate is likely to represent an upper bound on product and revenue loss since vessels would likely shift to alternative, albeit less profitable, fishing locations.

Impacts to the Ocean Quahog Fishery:
Unlike with surfclams, available data indicate that the Southern PSP Area of Concern has been a more consistent source of ocean quahogs to meet market demand. The impact of the loss of the proposed area for ocean quahog production depends upon the ability of vessels to fish elsewhere and make up for the difference.

The importance of the Southern PSP Area of Concern as a source of ocean quahog supplies has varied. In 2002 about 8% of ocean quahogs were landed from the area of which about half was landed January - May and half landed June – December. In 2003 about 6% of ocean quahogs were landed from the Southern PSP Area of Concern. The seasonal distribution of landings in 2003 was similar to that of 2002. In 2004 the area accounted for a little less than 8% of total ocean quahog supplies but about 70% of these landings were harvested from June to December. An estimate of the potential impact of a June-December closure of the Southern PSP Area of Concern may be approximated by the potential forgone revenue during the corresponding six months from observed activity. Based on 2004 data 214,016 bushels of ocean quahogs were landed from June-

December in the Southern PSP Area of Concern (Table 6). At an average price of $6 per bushel the total revenue loss would be $1.3 million. As noted previously, this estimate assumes that vessels will not adjust fishing locations to compensate for the forgone income. It is also notable that in 2005 total landings fell by nearly 900 thousand bushels; an amount that cannot be accounted for by the actual closure period implemented from June to September of 2005. In fact, even before the PSP closures had been implemented, harvested quantities of ocean quahogs from the Southern PSP Area of Concern from January to May had already fallen compared to the monthly distribution of landings in 2004 and did not come close to or exceed 2004 levels until December, 2005. The reason for this drop-off is uncertain but may be due primarily to poor market conditions created by competition from low-priced imports. For these reasons the estimate of a $1.3 million revenue loss is likely to be over-estimated.

Table 6. Monthly Ocean Quahog Landings for 2004-2005

	2004 Total Landings (bushels)	2005 Total Landings (bushels)	2004 Southern PSP Area of Concern (bushels)	2005 Southern PSP Area of Concern (bushels)
January	152685	299388	11456	9600
February	298976	265117	15296	7872
March	361839	230585	11936	3776
April	402709	269976	11104	0
May	507915	251643	38048	0
June	408512	320217	57856	0
July	285110	227544	43168	0
August	359375	302770	25920	3456
September	351395	247760	34080	7936
October	276289	157373	33056	3584
November	273753	285453	12416	4480
December	247117	181942	7520	13152
Total	3925675	3039768	301856	53856

Impacts of extending the Scallop Fishery Closure:
The impacts of the closure extension to the scallop fishery is the same as described above in Alternative A.

3. Summary of Economic Impacts:
Alternative A would be a closure of the Northern PSP Area of Concern to harvest of surfclams and ocean quahogs and a closure of the entire PSP Area of Concern to the harvest of whole shell or roe-on scallops. Alternative B would be a closure to the harvest of surfclams, ocean quahogs, and whole scallops in the entire PSP Area of Concern. The quantified economic impact of these alternatives is summarized below.

Alternative A – The economic impact of this alternative was estimated to only accrue to vessels that harvest whole scallops since available data show no landings of either surfclams or ocean quahogs landed in the Alternative A proposed closure area. Thus the impact of Alternative A was estimated to be $135 thousand. Whether this is an under- or over-estimate is uncertain. Available data indicate that affected scallop vessels may have already adapted to the requirement to shuck scallop meats at sea which would suggest that the economic impact, at least in revenue terms, would be over-estimated. The economic impact on scallop vessels, smaller general category scallopers in particular, may be under-estimated to the extent VTR data may under-represent the number of participating vessels and the extent of shell-stock activity.

Alternative B – The economic impact of this alternative would accrue to vessels engaged in both the scallop and the surfclam or ocean quahog fisheries. In addition to the $135 thousand reduction in scallop revenue, this alternative would result in an estimated reduction in surfclam revenue of $2.5 million and a reduction in ocean quahog revenue of $1.2 million. The total impact would be approximately $3.8 million. As noted previously this estimate of forgone revenue is uncertain. For surf clams and ocean quahogs the estimated revenue losses are likely to be over-estimated while the direction of estimation uncertainty for scallops is indeterminate.

D. Cumulative Effects

No negative cumulative effects to any physical or biological resources are anticipated from the proposed Northern PSP Area of Concern closure for clam fishing or the entire PSP Area of Concern closure to anything but shuck scallops since both Alternatives A and B are entirely administrative with no environmental impact.

Relative to economics, extension of the Northern PSP Area of Concern (Alternative A) would have no cumulative economic impacts to surfclam or ocean quahog fishers, processors or dealers or their social well being, since there are no reported landings from this area. If the entire PSP Area of Concern were closed through December, 2006 (Alternative B), however, there would be cumulative impacts to ocean quahog fishers. The lower landings in 2005 (Table 1) suggested some inability to make up for the closures by fishing elsewhere or may be due to reduced fishing effort due to competition from imported clam products. However, the PSP Area of Concern coincided with only a minor reduction (7-15%) in total landings, which were more likely reduced due to market prices and the increased cost of harvesting (e.g., fuel) rather than PSP closure. Adding another 6 months to the closure on top of the previous closure could be additive to losses to vessels who fish in this area and would have some cumulative effects on fishers.

Relative to scallops (Alternatives A and B), extending the proposed closure would have only minor impacts to either the scallop industry as a whole or to general category vessels that land a small percentage of the total scallop landings (< 1 %). The closure would require general category vessels that now land whole stock to shuck their meats at sea. This would add costs to fishing (increased time at sea, add crew, and the cost of fuel), but the shucked meats would still provide revenue to the fisher. Since some general category vessels operate to supplement their income from losses in other fisheries (e.g.,

groundfish), the cumulative effects to the extension on those vessels might be greater than other vessels that have more substantive income from other fisheries. Fewer than 30 vessels reported harvesting whole scallops in any of the last four years. However, even the majority of these vessels land considerably more shucked than whole scallops and given the low amount of landings involved, the impact is considered minor. The impact of the proposed closure would not likely be cumulative with the existing closure of the Georges Bank. Since that closure has been in effect since 1990, surfclam and ocean quahog fishers in this area have long been adjusted to not fishing for shellfish in this area and transferred their effort to other areas. Since general category scallop boats can land no more than of 400 pounds of scallops per trip and further restrictions on fishing within the Georges Bank scallop access areas, any cumulative effects of extending the June closure to these vessels are likely small.

VIII. EVALUATION OF EXECUTIVE ORDER 12866 SIGNIFICANCE

E.O. 12866 requires a review of proposed regulations to determine whether or not the expected effects would be significant, where a significant action is any regulatory action that may

- Have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, of the principles set forth in the Executive Order.

The proposed action does not constitute a significant regulatory action for purpose of the Executive Order. Two alternatives are proposed neither of which would have an annual effect on the economy of $100 million. Alternative A would prohibit the harvest of surfclams and ocean quahogs in the Northern PSP Area of Concern (see Appendix IA) and would prohibit the harvest of whole scallops throughout the entire PSP Area of Concern (see Appendix IB). Available data indicate that neither surfclams nor ocean quahogs are harvested in the proposed closure area so the economic impact would be limited to the forgone revenues associated with vessels that prefer to harvest whole scallops. These foregone revenues were estimated to be $135 thousand. These revenues may be recovered should vessels be able to increase effort in areas outside the PSP Area of Concern or if they shuck scallops at sea.

Alternative B would prohibit the harvest of surfclams, ocean quahogs, and whole shell-on in the entire PSP Area of Concern. This alternative may not be implemented at this time since testing for PSP has not indicated a need for this more prohibitive action. However, should tests indicate elevated PSP levels are present the Alternative B closure may become necessary to protect public health. The estimated impact of the Alternative B closure was $3.8 million. This estimate may be high since vessels may be able to fish in other areas and landings of both surfclams and ocean quahogs appear to be on the decline due to weak market demand and availability of imported clam product substitutes.

Note that the estimated impacts discussed herein apply only to Federal permit holders fishing in Federal waters. The overall impact of any harmful algal bloom (HAB) event is likely to be substantially larger on individual states due to the extent of shellfish beds and aquaculture activity that takes place in waters solely under State jurisdiction. For example, as a result of the 2005 HAB event, the state of Massachusetts estimated revenue losses to state-managed shellfish activities of about $10.3 million while the state of Maine estimated a loss of between $6.5 and $10 million. These revenue losses were associated with a range of shellfish species that are harvested primarily from tidal flats or inshore State waters including oysters, mussels, soft shell clams, and hard shell clams. Revenue losses due to Federal action taken during 2005 were substantially lower, due to the comparatively smaller scope of affected Federal shellfish fisheries. That is, the vast majority of both the surf clam and ocean quahog fisheries and the scallop fishery takes place in areas unaffected by 2005 HAB event.

IX. PERSONS/AGENCIES CONSULTED

Social Science Unit of the NMFS Northeast Fisheries Science Center
U.S. FDA

X. REFERENCES

DiStefano, P. 2005. Personal Communication. Telephone conversation between P. DiStepfano (USFDA) and K. Chu, (NMFS), December 2005.

Mid Atlantic Fishery Management Council (MAFMC). 1977. Atlantic Surfclam and Ocean Quahog Fishery Management Plan, Dover DE.

MAFMC. 2003. Amendment 13 to the Atlantic Surfclam and Ocean Quahog Fishery Management Plan, dated June 2003, Dover DE.

National Marine Fisheries Service (NMFS). 2005. Finding Of No Significant Impact/Environmental Assessment For The Closure Of Federal Waters For A Public Health Emergency Red Tide Event. NMFS Northeast Regional Office, signed June 14, 2005, Gloucester MA

New England Fishery Management Council (NEFMC). 2004. Amendment 10 to the Atlantic Sea Scallop Fishery Management Plan, Newburyport, MA

NEFMC. 2006. Framework Action 18 to the Atlantic Sea Scallop Fishery Management Plan, Newburyport, MA. Copy available at: http://www.nefmc.org/scallops/index.html

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2004. Endangered Species Act Section 7 Consultation on the Atlantic Sea Scallop Fishery Management Plan [Consultation No F/NER/2004/01606], dated 12/14/04, NMFS Northeast Regional Office, Gloucester MA

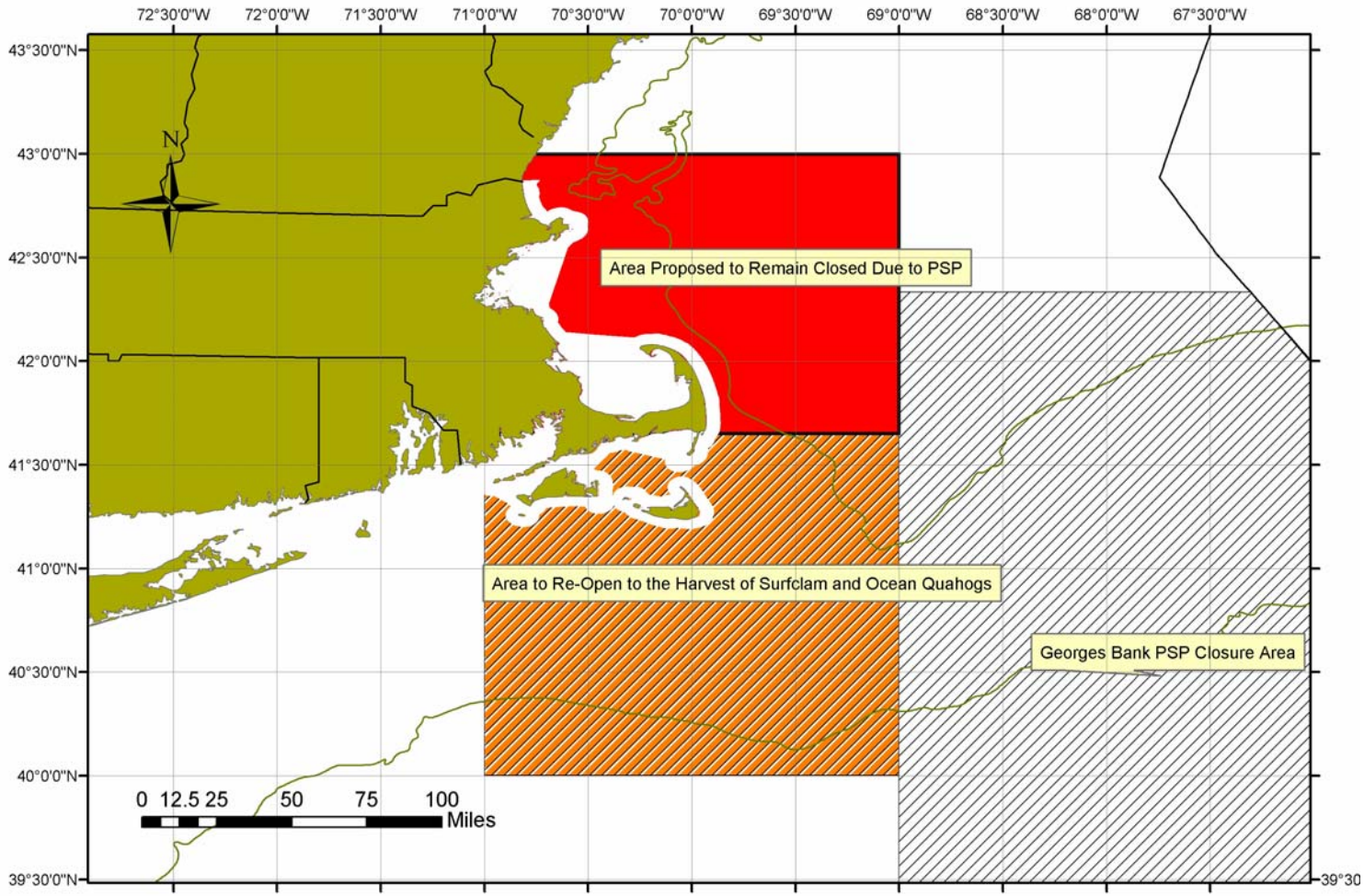
US Food and Drug Administration (USFDA). 2005a. Letter to Rebecca Lent from Lester Crawford, dated June 10, 2005. US FDA, Rockville, MD

USFDA. 2006a. Letter to Jim Balsinger from Andrew C. von Eschenbach, dated June 23, 2006. US FDA, Rockville, MD

APPENDIX I A

The Northern Paralytic Shellfish Poisoning (PSP) Area of Concern (Alternative A) for the proposed extension of the prohibition of harvesting of Surfclams and Ocean Quahogs through December 31, 2006 is the northern portion of the entire PSP Area of Concern (closed June 2005) in red and labeled "Area Proposed to Remain Closed Due to PSP"

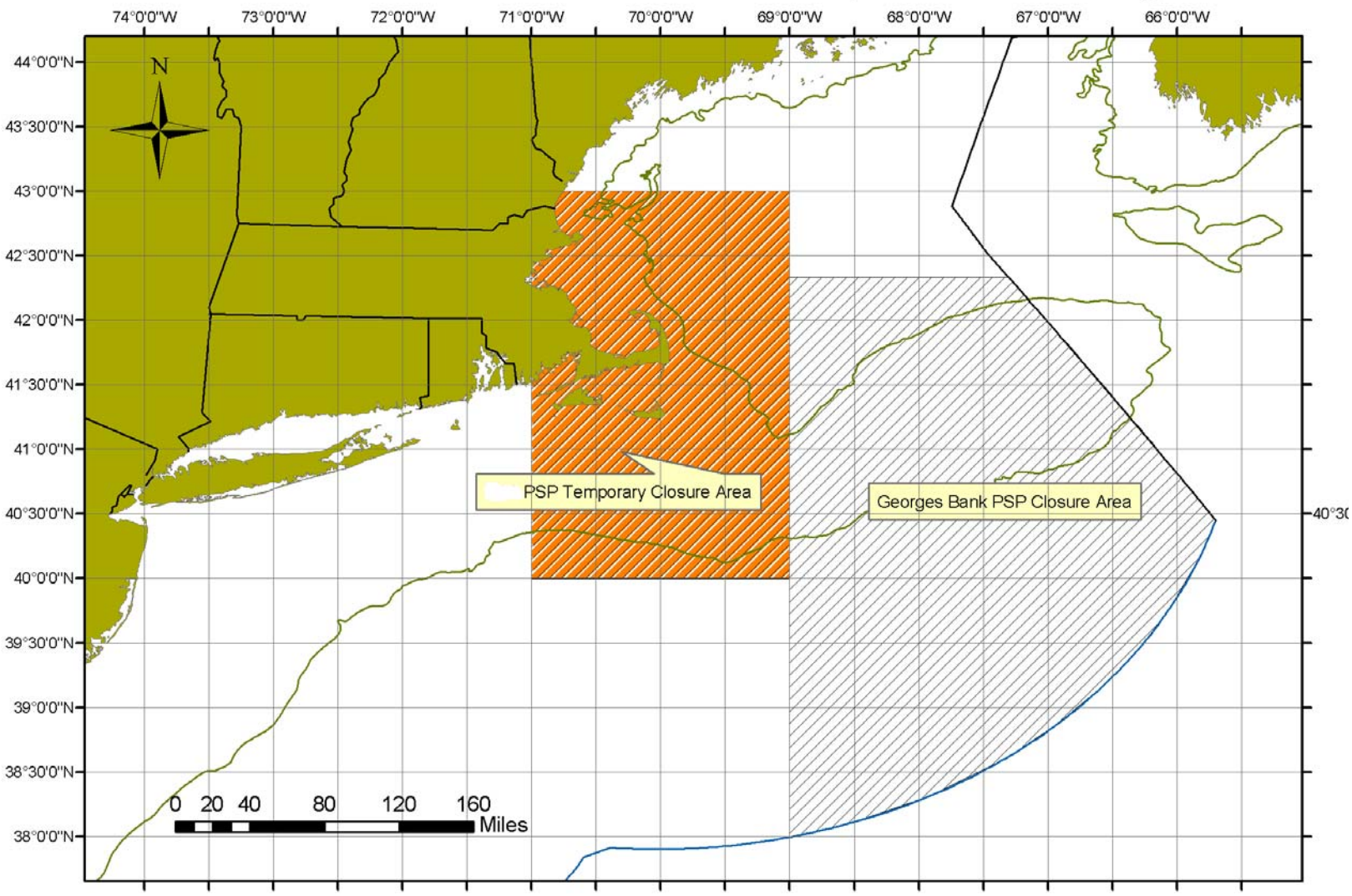
Area Proposed to Re-Open to Ocean Quahog and Surfclam Harvest (EEZ Portions Only), Due to the Test Results of the Toxin that Causes Paralytic Shellfish Poisoning



APPENDIX I B

The PSP Area of Concern proposed to extend the prohibition of harvesting whole scallops (Alternatives A and B) through December 31, 2006 is shown here. This same area also serves as an alternative Closure Area for extension of the prohibition of Surfclams and Ocean Quahogs (Alternative B) if FDA determines that PSP toxin levels are high enough to impact public health in the Southern PSP Area of Concern. The area is seen in orange and labeled as "PSP Temporary Closure area"

Area Closed to Shellfish Fishing, With the Exception of Sea Scallop Adductor Muscles, Due to the Presence of the Toxin that Causes Paralytic Shellfish Poisoning



APPENDIX II

Marine Mammals and Protected Species

The list of protected species affected by the Surfclam/Ocean Quahog FMP is discussed in the FSEIS for Amendment 13. The following species are found in the proposed PSP Closure area and are listed under the Endangered Species Act of 1973 (ESA) as endangered, threatened, or as candidate species. The list includes a number of species that are identified as protected under the Marine Mammal Protection Act of 1972 (MMPA) as well as two right whale critical habitat designations that are found in the same area.

Cetaceans

Northern right whale (*Eubalaena glacialis*)	Endangered
Humpback whale (*Megaptera novaeangliae*)	Endangered
Fin whale (*Balaenoptera physalus*)	Endangered
Blue whale (*Balaenoptera musculus*)	Endangered
Sei whale (*Balaenoptera borealis*)	Endangered
Sperm whale (*Physeter macrocephalus*)	Endangered
Minke whale (*Balaenoptera acutorostrata*)	Protected
Harbor porpoise (*Phocoena phocoena*)	Protected
Risso's dolphin (*Grampus griseus*)	Protected
Pilot whale (*Globicephala* spp.)	Protected
White-sided dolphin (*Lagenorhynchus acutus*)	Protected
Common dolphin (*Delphinus delphis*)	Protected
Spotted and striped dolphins (*Stenella* spp.)	Protected
Bottlenose dolphin (*Tursiops truncatus*)	Protected

Seals

Harbor seal (*Phoca vitulina*)	Protected
Gray seal (*Halichoerus grypus*)	Protected
Harp seal (*Phoca groenlandica*)	Protected

Sea Turtles

Leatherback sea turtle (*Dermochelys coriacea*)	Endangered
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered
Green sea turtle (*Chelonia mydas*)	Endangered
Hawksbill sea turtle (*Eretmochelys imbricata*)	Endangered
Loggerhead sea turtle (*Caretta caretta*)	Threatened

Fish

Shortnose sturgeon (*Acipenser brevirostrum*)	Endangered
Atlantic salmon (*Salmo salar*)	Endangered
Barndoor skate (*Dipturus laevis*)	Candidate Species

Birds

Roseate tern (*Sterna dougallii dougallii*)	Endangered
Piping plover (*Charadrius melodus*)	Endangered

Critical Habitat Designations

Right whale	Cape Cod Bay
	Great South Channel